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ABSTRACT

This research study examined the nature of nonverbal teacher-student interaction in a second-grade inclusive classroom. The purpose of the study was to compare the nonverbal behaviors of children who are considered average in ability with those who are perceived as cognitively challenged, while they are engaged in general classroom instruction in both large and small group settings. The study also examined the nonverbal behaviors of one teacher as she interacted with a select group of students within the context of a naturalistic classroom environment. Data collection involved classroom observations--noting context, formal and informal discussions with the teacher regarding lesson instruction, student profiles, and overall study validity--and the videotaping of small and large group math lessons. Analyses indicated that the most common nonverbal behavior exhibited by both the special education students (SES) and general education students (GES) was "attending to procedure" under the category of Eye Focus. The SES varied more among themselves in the "verbal" eye contact category, and the "teacher" eye focus and "non-attending" subcategories that did the GES. "Verbal" eye contact and "attending to student" and "attending to procedure" in the Eye Focus category were the predominant nonverbal behaviors used by the classroom teacher. In most cases, the majority of nonverbal interaction occurred between students who sat in close proximity regardless of their cognitive ability. The small group setting lent itself to greater frequencies in each of the nonverbal categories for both GES and SES. The data from this study also indicated a relationship between teacher voice tone and effective classroom management. Teachers who consider possible nonverbal behaviors that engage all students may increase their understanding of student learning as they attempt to meet the diversity in today's inclusive classroom. (Contains 13 references.) (HTH)

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UNDERSTANDING THE ROLE AND POTENTIAL IMPACT OF NONVERBAL COMMUNICATION IN THE PRIMARY INCLUSION CLASSROOM

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ABSTRACT

This research study uses a descriptive approach and systematic observations to examine the nature of nonverbal teacher-student interaction in a second grade inclusion classroom. Its purpose is to compare the nonverbal behaviors of children who are considered average in ability with those who are perceived as cognitively challenged, while they are engaged in general classroom instruction in both large and small group settings. This study also examines the nonverbal behaviors of one teacher as she interacts with a select group of students within the context of a naturalistic classroom environment.

The data collection involved classroom observations noting context, formal and informal discussions with the classroom teacher regarding lesson instruction, student profiles, and overall study validity and the videotaping of small and large group math lessons.

For purposes of analysis, each videotape was viewed numerous times in an effort to capture the nonverbal interaction in the categories of Verbal Eye Contact, and Nonverbal Eye Focus (i.e., attending to teacher/student, attending to procedure, non-attending) in three situations: Student-teacher, Teacher-student, Student-student. Intra-observer agreement was established. The role of teacher/student proximity and teacher voice tone were addressed separately.

The results indicate that the most common nonverbal behavior exhibited by both the special education students (SES) and general education students (GES) was attending to procedure under the category of Eye Focus. The SES varied more among themselves in the verbal eye

contact category, teacher eye focus and non-attending subcategories than did the (GES). Verbal eye contact and attending to student and attending to procedure in the Eye Focus category were the predominant nonverbal behaviors used by the classroom teacher. In most cases the majority of nonverbal interaction occurred between students who sat in close proximity regardless of their cognitive ability. The small group setting lent itself to greater frequencies in each of the nonverbal categories for both GES and SES. The data from this study also indicate a relationship between teacher voice tone and effective classroom management. Teachers who consider the possible nonverbal behaviors which engage all students, may increase their understanding of student learning as they attempt to meet the diversity in today's inclusion classroom.

UNDERSTANDING THE ROLE AND POTENTIAL IMPACT OF NONVERBAL COMMUNICATION IN THE PRIMARY INCLUSION CLASSROOM

Introduction

Research studies done in classroom environments suggest that nonverbal behaviors send clear and distinct messages. Moreover, these nonverbal messages can be a more explicit and candid means of determining intent than merely the spoken word alone. Researchers posit that nonverbal behaviors often influence the demeanor of teachers and students (Woolfolk & Brooks, 1983; 1985; Feldman & Prohaska, 1979; Schwebel & Cherlin, 1972; Brooks & Rogers, 1981). What appears to be lacking in the research, however, are studies which explore the nonverbal communication of primary school children and their teachers in inclusion classrooms.

Inclusion is defined here as a classroom environment where children are perceived to possess an extensive range of cognitive, emotional, social, and psychomotor strengths and weaknesses. Students with special needs as well as students perceived as average or above average in ability are integrated within the general education classroom setting. In order to comply with state and federal mandates, professional support services (e.g., special needs teacher, speech and language pathologist, occupational therapist, guidance counselor) are provided in the classroom setting for those children in need.

Educators are challenged daily in their attempts to inspire students in the learning process. Teachers and other school professionals tend to rely on the potency of words when attempting to

project their message. Ekman and Friesen (1969), Mehrabian and Ferris (1967) and other researchers in the field of nonverbal communication, however, argue that up to 93% of all human interaction is considered nonverbal. Woolfolk and Brooks (1985) suggest that teacher nonverbal behaviors can either be a source of clarity or confusion for students in the classroom. If we accept the validity of these contentions, then we need to ask ourselves how do nonverbal interactions affect the learning process within the classroom environment? Are teachers fully aware of their nonverbal behaviors? If not, then what silent messages are teachers and teacher educators sending their students? How might those messages affect student attitude, performance, and self esteem?

After an exhaustive search of the literature, no studies were found which addressed the nonverbal interaction of primary school students and/or their teachers operating in inclusion settings. Although researchers did explore the nonverbal communication of students and teachers in various academic settings during the 1970's and 1980's, a shift in focus occurred in the 1990's from the classroom to other dyadic or social interaction settings (e.g., toddlers, parent-child, the judicial system, physician-patient, marital couples). This study investigates the dynamics of teacher-student nonverbal communication in the complex inclusion classroom and provides additional indicators for teachers and teacher educators to consider as they evaluate positive and productive learning environments for all students.

The purpose of this case study was to examine how specific nonverbal behaviors were expressed during classroom instruction in the following nonverbal categories: Kinesics - verbal

eye contact and nonverbal eye focus; Proxemics - nearness of a student to a teacher; Paralanguage - teacher voice tone. Terms will be more clearly defined under Data Collection.

Research questions which propelled this study were:

1. Which nonverbal behaviors were most commonly exhibited by the focus students and teacher?
2. Were the nonverbal behaviors exhibited by the general education students and the special needs students similar in type, and/or frequency?
3. Which context (small vs. large group setting; teacher-student proximity) prompted the greatest frequency of nonverbal behaviors?

Methodology

Participants. The focus of this study was limited to one second grade inclusion classroom and one experienced female regular education teacher. The classroom teacher (Miss O) in this study was chosen based upon my knowledge of her as a primary school educator and the fact that she was earmarked for an inclusion class during the 1999-2000 school year. Miss O is an experienced practitioner of sixteen years. She has earned a bachelor's degree in early childhood education and a master's degree in special education. Miss O is a 38-year old middle class Caucasian woman who has taught in the same school district for 14 years. In December of 1999, I visited Miss O and we discussed student selection for this study. The parameters of her inclusion class were predetermined by the assistant principal, who in theory, formats the classes based upon even distribution of special needs students among those teachers assigned to teach in an inclusion setting, during any given year. Unaware of the make up of her classroom, I asked for Miss O's

assistance in forming a focus group. My goal was to concentrate on six children, four special education students with cognitive learning disabilities and two general education students. Students with learning disabilities usually have average or above average IQ scores. The special education students in this class all possessed IQ scores of 95+ and ranged in age from seven years and eight months to eight years and six months. Four of the special education students (three boys and one girl) required support in the areas of reading and math (based upon standardized test scores and current placement) and for these reasons were chosen to be part of the focus group. The two general education students, (one male and one female) were chosen by Miss O based on their average cognitive abilities. Records from previous teachers also confirmed this assessment. The two general education students ranged in age from seven years and seven months to eight years and three months. All of the data were collected within the context of a naturalistic classroom environment. The abbreviation (SES) signifies special education student and (GES) signifies general education student throughout this paper.

Data Collection. The data collection involved classroom observations noting context, formal and informal discussions with the classroom teacher regarding lesson instruction, student profiles and overall study validity and video taping (6) small and (4) large group math lessons. Nonverbal interaction data were collected in three situations: Student interacting with Teacher, Teacher interacting with Student, and Student interacting with Student. In each situation, four specific nonverbal behaviors were examined: Verbal eye contact and Nonverbal Eye Focus which was subdivided into three categories: Attending to Student/Teacher, Attending to Procedure, and Non-Attending.

The following is a brief review of these nonverbal behaviors and how they were defined.

Verbal Eye Contact (V) was defined as direct eye contact made by the teacher or student during verbal exchanges. Establishing and maintaining eye contact is a fundamental aspect of classroom interaction and management. It establishes the teacher's presence (Hodge, 1971) and often indicates the importance of the teacher's message. Eye contact has the power to include or exclude others. For example, a teacher may initiate eye contact to engage student attention or to prevent a child from disrupting a lesson. Eye contact may also assist students in their ability to recall information (Otteson & Otteson, 1980) perhaps leading to improved concept development.

Eye Focus has been categorized as follows:

- Attending to Student/Teacher (S/T) occurred when a student was focusing on the teacher without the teacher making direct eye contact with that student or when the teacher was focused on a student without the student returning that gaze. For example, a student may have looked directly at the teacher as she gave directions regarding the next activity planned without the teacher making direct eye contact with that student. This category offers data regarding how often a student might have focused on the teacher or how often a teacher might have focused on a student during a given math activity.
- Attending to Procedure (P) occurred when a student was watching the procedure of the teacher or other student while that individual was modeling an action, demonstrating a math activity, or taking a turn. Typical examples of the procedure subcategory which warranted a tally include: watching a student counting coins, students watching game

boards, students counting aloud when asked, students manipulating base ten blocks, dice or other materials during math lessons. This category offers data on how often the students or teacher focused on the materials and process of the math activity as they participated in both large and small group math lessons. This category is similar in nature to assessing on-task behavior.

- The Non-attending subcategory (N) in the Eye focus category indicated when a student or teacher had momentarily disengaged from a lesson. These moments of disengagement were brief but deliberate enough to warrant a tally. Students were tallied in this category when they were observed as being distracted to the point of no longer following the lesson protocol.

Videotaping and coding procedures. Each math lesson was videotaped using two cameras on tripods. In the large group lessons, one camera primarily focused on the classroom teacher and the other focused on the six participating students during lesson instruction. In the small group lessons, each camera was angled so that the teacher and three of the six students were seen on each tape. This two-camera technique was most effective in capturing nonverbal interaction on videotape but also increased the complexity of coding behaviors. Each videotape was viewed simultaneously for accuracy in coding. This was accomplished by using two VCRs and two television screens when viewing each lesson.

For purposes of analysis, each videotape was viewed numerous times in an effort to capture the nonverbal interaction in each of the nonverbal categories stated and in each of the three

situations. Tallies were used as a means of counting the frequency of behaviors in the categories of verbal eye contact and eye focus for each lesson and each situation. A time sample matrix using 30 second intervals was used to log in typical and atypical teacher voice tone as well as teacher silences during lesson instruction. A seating chart noting where students chose or had been assigned to sit during both the large and small group math lessons, provides additional data addressing the teacher/student proximity component of this study.

Inter-rater Reliability. Reliability was established in each of the nonverbal categories for both small and large group math lessons. Two business professionals met with me separately during March of 2001 to complete this process. A discussion of the coding instruments I developed and a practice session to insure an understanding of what constitutes a notable nonverbal behavior took place. Together we viewed and coded one small group and one large group math lesson and successfully established inter-rater reliability for the Eye Focus and Voice Tone categories (r= .92 and r=.90 small group; r=.86 and r=.89 large group). In addition, two doctoral students, who were also practicing teachers, established inter-rater reliability in the Verbal Eye Contact category for small group math (r=.82; r=.96).

The use of frequencies, coding symbols, seating arrangement charts, and a written narrative noting context (including conditions, situations, or circumstances which might affect instruction or participation) assisted in capturing and analyzing the student-teacher, teacher-student, and student-student nonverbal interaction for each lesson.

Results

Addressing the Research Questions

1. **Which nonverbal behavior(s) are most commonly exhibited by the focus students and teacher?**

The data indicate that students, regardless of cognitive ability, appeared more focused on their learning when actively participating in structured math lessons. Procedure eye focus frequencies dominated when students were manipulating materials or watching the teacher or students closest to them manipulate materials during math lessons. Indications from the data in this study suggest that when students were using materials or manipulatives they appeared to be more engaged in that learning activity. Research suggests that student engagement can lead to higher levels of skill development (Woolfolk & Brooks, 1985). This may be especially significant for young students who are in the process of weaving the underpinnings which will support a foundation of knowledge and hopefully the desire for a life of inquiry.

2. Are the nonverbal behaviors exhibited by the general education students and the special education students similar in type and/or frequency?

GES vs. SES. Procedure frequencies for GES and SES are the most similar of all of the nonverbal categories studied in both large and small group configurations in the Student-Teacher nonverbal interaction situation.

As previously stated, the procedure component of the eye focus category consistently showed the highest frequencies for both the special education students and the general education students in Student-Student interaction except in specific situations in which focusing on a teammate appeared preferable. Team activities appeared to prompt interaction with students who were not as physically close and may, at times, supercede the proximity factor as a more salient influence. Individual and/or team performances coupled with the basic desire to win are often enticing incentives for student engagement.

3. Which context (small vs. large group setting; teacher-student proximity) prompts the greatest frequency of nonverbal behaviors?

Small vs. Large Group. The small group setting lent itself to greater frequencies in each of the nonverbal categories for both GES and SES in this study. Perhaps this is due, in part, to students having more opportunities to interact in small groups. Furthermore, in small groups the expectations for each group member can often be greater in terms of participation and team work. It is not as easy to hide among the few as it is to hide among the many. Small group activities provide opportunities for students to be physically closer to the teacher and to other students enabling each to watch the process of the other for clarification and immediate remediation. This may be especially important for students who have learning difficulties or need more time when processing new information. In this study, students participated in turn taking activities in the small group configuration. This technique gives students the opportunity to see the same skill or procedure modeled numerous times by different individuals. Frequent repetition is a tried and

true learning technique. This turn taking technique may have influenced the verbal and nonverbal behaviors of both students and teacher in these small group lessons. Fewer frequencies in the non-attending subcategory data from this study may be another indication of greater student engagement in the small group configuration.

Proximity. The seating of the six focus students in relation to teacher location did not appear to alter teacher-student nonverbal interaction in the large or small group configuration. Closer student-teacher proximity didn't consistently raise or lower the nonverbal frequency.

Implications for Teachers and Teacher Educators

The data from this study also indicate a relationship among teacher voice tone, effective classroom management (Bugental & Love, 1975; Hall and Levine, 1976 as cited by Blanck & Rosenthal, 1982, p.225) and student performance (Woolfolk, 1978; 1983). Miss O tallied high in the positive or approving voice tone and in giving the students the opportunity to think (silences) before responding. Her frequencies were significantly lower (6%) in the more re-directive or atypical category, however this selective usage of a lower of voice tone appeared to be quite effective in eliminating unwanted behaviors. Middleman (1972) found that teachers using positive language while projecting a no-nonsense delivery manner appeared to be the most effective in increasing student productivity. Perhaps even more important was Miss O's natural ability to synchronize her verbal and nonverbal behaviors. This synchronicity appeared to establish a harmonious atmosphere and may have contributed to the apparent lack of confusion in the

classroom. Teachers who consciously integrate their verbal and nonverbal behaviors may help improve their overall communiqué with students.

The data collected in this study also support the research which suggests the existence of a viable connection between teacher nonverbal interaction and classroom management techniques. As Woolfolk and Brooks (1985) conclude, "The link between teacher nonverbal behavior and student learning may be found in research on effective classroom management. Students are more likely to learn if they cooperate and participate in class activities designed to produce learning. Nonverbal expressions of the teacher may play a major role in establishing and maintaining pupil cooperation during instructional activities" (p.520). To be able to accurately appraise another's emotions as well as to accurately project one's own emotions is critical for social competence (Goldstein & Feldman, 1996). This lack of social awareness may affect the child's relationships with his/her teachers and peer group.

Recognizing the significant evidence provided by the nonverbal research coupled with nearly two decades of personal teaching experience and the results of this study, I offer the following suggestions for consideration as teachers begin their school year.

1. Begin the year by using an affirmative voice tone.
2. Model desired classroom behaviors and practices.
3. Teach nonverbal signals and their meanings - all students do not perceive cues in the same manner.

4. Vary voice tone, teacher/student location in the room, and expressive movements to help retain student attention.

5. Be consistent in establishing and carrying out procedures - this too is a nonverbal indicator which helps students understand and function effectively within the parameters of the classroom.

6. Synchronize verbal and nonverbal behaviors - mixed messages are particularly confusing for young children and especially for students with special needs who may already be struggling to process information.

7. Be ever mindful of context (the situation defines the course of action)- this will ultimately determine the appropriate and most effective nonverbal behavior to use.

Teachers ... "can make it possible for the children to hear and see their thinking" (Woolfolk & Brooks, 1985).

A Final Thought

When an effective communication system has been established, there may be greater opportunities for learning and fewer chances for disruptions. When there is less of a need to concentrate on modifying student behavior there may be more of a desire to modify and improve instructional practices.

Teachers who develop positive classroom management methods may be more willing to use multiple teaching strategies and techniques. This multiplicity may help to engage and inspire students in their learning as well as minimize potential discipline problems.

Recognizing that nonverbal behaviors and nonverbal interaction in classroom settings can provide insights into the dynamics and effectiveness of teacher-student communication is another indicator for teachers and teacher educators to consider as they develop their pedagogical repertoires.

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